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In Cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS - AUGUST 11, 1951
(Eleventh Cotton Insect Survey Report for 1951)

August is the month when insects usually cause the greatest damage to the cotton crop. It is during this month that the proper use of insecticides may be of greatest value in increasing the yields and improving the quality of the cotton crop. Over wide areas in most of the cotton-growing States more profitable results are likely to be obtained from the proper use of insecticides during August than in any other month. In every field where the cotton crop has not matured careful examinations should be made frequently to determine if it is necessary to apply insecticides for the control of bollworms, leafworms, spider mites, stink bugs, boll weevils, or other pests.

In every county where either the boll weevil or pink bollworm occurs the infestations are likely to rise rapidly during August and many fields not previously infested will become infested. The period of boll weevil activity in late summer when many adult weevils fly from field to field, that is often called "boll weevil migration", always takes place in August, except in areas where it began in July. This year boll weevil migration started at Florence, South Carolina, about August 9.

Chemical defoliation of cotton is one of the most effective methods of reducing the number of boll weevils and pink bollworms that carry over from one season to the next. Removal of leaves checks boll weevil and pink bollworm breeding and prevents staining of lint in open bolls by aphids and cotton leafworms. Defoliation reduces the losses from boll rot, improves the grade of fiber, increases the efficiency of mechanical harvesting and reduces the labor for hand picking. In areas where the boll weevil or pink bollworm occur the greatest benefit from defoliation is obtained in the reduction in the number of these insects in the cotton fields the following season.

SHORTAGES

Arizona: W. A. Stevenson reported August 10: "There is a shortage of dusting planes and experienced operators."

BOLL WEEVIL

Virginia: W. L. Howe, Associate Entomologist, Tidewater Field Station, Holland, reported on August 13: "Boll weevil injury to squares seems to be on the increase. We found a 72% infestation in one field on August 10 which had been dusted only once this season. The plants did have a fair number of large uninjured bolls. Treated fields are remaining low. Four fields examined showed weevil injury varying from 1 to 4%."

North Carolina: Cotton News Letter No. 20 issued by the Extension Service on August 10 stated: "Most cotton in southeastern counties and much of the earliest planted cotton throughout the State is near maturity, especially where dry conditions have prevailed. In general, weevil activity increased sharply this week; however, light infestations were still encountered in many fields in western and northern border counties. Where squares are few and infestations high, young bolls are

being punctured. In general, migration is well underway in the majority of cotton-producing counties." In the examination of 193 poisoned fields in 34 counties 180 were infested at an average rate of 18% punctured squares as compared with 13% last week. In the examination of 122 unpoisoned fields 121 were infested at an average rate of 49% punctured squares as compared with 42% last week.

South Carolina: The 10th Weekly Report issued by the Extension Service August 7 stated; "Many coastal plain counties could not make square counts this week due to the maturity of the plants. Weevil infestations continue to rise on both fields receiving and those not receiving applications of insecticides for insect control; however, the rise in fields receiving control measures was not as great." General weevil activity, usually called "boll weevil migration", apparently started at Florence about August 9. L. C. Fife reported that two flight screens that were erected in open fields on July 25 did not catch any boll weevils during the first 4 days. During the 7 days between July 31 and August 6, inclusive, 4 boll weevils were caught, but on August 9 a total of 32 weevils were caught on these flight screens. All of the 54 unpoisoned fields examined in 18 counties were infested at an average rate of 91% punctured squares. In the examination of 54 poisoned fields in the same 18 counties the average infestation was 60% punctured squares.

Georgia: C. M. Beckham, G. M. Sutton, and E. T. Cody reported during the week ending August 10 that weevils were found in 92 of the 98 poisoned fields examined in 19 counties at an average rate of 11% punctured squares. The infestation ranged from 1 to 10% in 53 fields, from 11 to 25% in 29 fields and from 26 to 50% of the squares were punctured in 10 fields. Weevils were found in all of the 69 fields examined in the same 19 counties at an average rate of 22% punctured squares. The infestation ranged from 1 to 10% in 12 fields, from 11 to 25% in 33 fields and in 24 fields between 26 and 50% of the squares were punctured.

Alabama: During the week ending August 11 Conrad J. Ward reported that cotton is fruiting freely with many bolls nearing maturity in 10 northeastern counties. However, in some small dry spots in the Sand Mountain area cotton is beginning to shed squares and young bolls because of drought. Weevils were found in 63 of the 75 fields examined at an average rate of 11% punctured squares. The infestation ranged from 1 to 25% in 59 fields and in 4 fields more than 25% of the squares were punctured.

Tennessee: Arthur P. Morris, Entomologist, reported on August 10 that practically all of the older cotton in 7 western counties was maturing and the growth of younger cotton on upland fields was being retarded due to dry, hot weather. However, the young cotton on bottom land is still in a good growing condition. Weevils were found in 38 of the 54 fields examined at an average rate of 11% punctured squares. The heaviest infested fields were observed in Fayette, Hardin, and McNairy Counties.

Mississippi: E. W. Dunnam and S. L. Calhoun reported on August 10: "Early planted cotton is maturing rapidly. Much old cotton is showing permanent wilt and throwing off squares and young bolls on account of hot, dry weather. Most young cotton on black land is still growing and fruiting well. Some cotton on loam land is deteriorating now and unless rains occur within a very short time these crops will be cut short. On account of local migration of weevils a higher percentage of fields were infested this week than last. Of 558 fields examined 423 or 76% were infested against 73% last week. The average infestation in infested fields was 11% or 1% above last week and 8% in all fields which compares with 7% last week. Many of the high infestation records mean very little, because there are very few squares on some old cotton that is maturing out."

Louisiana: R. C. Gaines reported on August 9 that heavy rains during the past 10 days accounted for increased boll weevil damage. In the examination of 717 fields in 10 parishes weevils were found in all fields at an average rate of 20% punctured squares as compared with 17% last week, 27% in 1950, and 34% in 1949. The infestation ranged from 1 to 10% in 215 fields, from 11 to 25% in 323 fields, from 26 to 50% in 146 fields, and more than 50% of the squares were punctured in 33 fields.

L. D. Newsom reported for the Shreveport area: "Hot, dry weather is damaging cotton in the area. Much of it is maturing rapidly. A limited amount of movement by the boll weevil has been observed in some fields, but there is no indication that general migration has started."

Arkansas: Charles Lincoln, Entomologist, wrote on August 6 that the cotton insect situation in Arkansas is quite disturbing. Heavy boll weevil infestations have not been general, but "there is a serious threat as the second generation is emerging, and we have a great deal of very late cotton."

There have been a few scattered showers during the week ending August 10 but weather conditions in general have been favorable for cotton growth. Boll weevil infestation counts made in 932 fields in 15 counties showed 12% punctured squares as compared with 10% last week. In southwestern counties the average infestation was 18% as compared with 15% last week, 48% in 1950, and 23% in 1949. In the southeastern counties the average infestation was 24% as compared with 16% last week, 30% in 1950, and 50% in 1949. The average infestation was 13% punctured squares in the northeastern counties.

Texas: Boll weevils are migrating in search of food in many areas. Farmers who have cotton that is still fruiting or that has immature bolls that are expected to mature should inspect their fields frequently and use insecticides to protect the bolls if weevils appear in damaging numbers.

Oklahoma: C. F. Stiles, Extension Entomologist, reported on August 11: "The boll weevil is under control in practically all fields where systematic control programs were followed. However, farmers should continue to inspect their fields frequently for migrating weevils. In the examination of 182 fields in 31 counties 157 were found to be infested with weevils. The heaviest infestations were observed in Okmulgee, Payne and Wagoner Counties."

PINK BOLLWORM

Texas: The Division of Pink Bollworm Control reported August 7 that gin trash machines were operated in the four Lower Rio Grande Valley Counties during the week ending August 4. The pink bollworm infestation in Cameron County increased daily. When the work was terminated July 31 there was an average of 95 pink bollworms per bushel of gin trash as compared with 359 on August 1, 1950. It is interesting to note that on July 25, 1950, the average was 132 per bushel, as compared with 339 on July 28. The increase was more gradual this year. In Hidalgo and Starr Counties there was a slight decrease during the week in the number of pink bollworms per bushel. The infestation is still considerably higher than in 1950. The number of pink bollworms per bushel was 103 in Hidalgo County in 1951 as compared with 44 on the same date last year. In Starr County 166 worms were collected in 1951 as compared with 71 in 1950. The infestation in Willacy County changed very little during the week, based on the pink bollworms per bushel. There were 13 per bushel

as compared with 16 on the same date last year. More trash has been examined to date in Willacy and Starr Counties than last year but slightly less in Cameron and Hidalgo Counties. Based on the gin trash inspections made during the week ending August 4, it appears that the pink bollworm populations have been greatly reduced this season as compared with last year in the Counties of Cameron, Duval, Jim Wells, and Nueces and slightly reduced in Kleberg and Willacy Counties. The pink bollworm populations are greater now than a year ago in the Counties of Bee, Brooks, Hidalgo, Jim Hogg, Live Oak, San Patricio, and Starr.

BOLLWORMS AND OTHER LEPIDOPTEROUS LARVAE ON COTTON

South Carolina: The Tenth Weekly Report issued by the Extension Service August 7 stated: "Bollworms are present or increasing in 26 counties throughout the State. Eggs and small worms are reported more numerous on rank cotton. Infestations at this time of the year can be more serious than at any other time since the fruit attacked cannot be replaced. This insect is also partly responsible for paving the way for boll rot infections if weather conditions are favorable for its outbreak." L. C. Fife reported heavy bollworm infestations in two fields in Sumter County.

The bollworm, Heliothis armigera (Hbn.), was collected in 4 cotton fields in Florence County on July 16, 17 and 19, and the tobacco budworm, H. virescens (Fabr.), in 1 field on July 17. (Collections by G. C. Finklea and R. L. Walker)

Alabama: W. A. Ruffin, Extension Entomologist, reported on August 6 that some damage to cotton from climbing cutworms had been noted in 3 counties. "The only other lepidopterous insects which we have found in numbers in cotton fields are the tobacco budworm and the bollworm."

Tennessee: Arthur P. Morris, Entomologist, reported on August 10 that cotton squares injured by lepidopterous larvae were observed in 37 of the 54 fields examined in 7 western counties. No injury was noted in 16 fields. The infestation ranged from 1 to 10% injury in 27 fields, from 11 to 25% in 7 fields, from 26 to 50% in 3 fields, and 1 field had more than 50% injured squares.

Mississippi: Bollworms and other lepidopterous larvae continue to be a serious threat. In the examination of 558 cotton fields in 17 Delta counties fall armyworms were reported in 5 fields, yellow-striped armyworms in 27 fields, garden webworms in 3 fields, lepidopterous eggs in 91 fields, lepidopterous bud damage in 119 fields, lepidopterous larvae were reported in 112 fields, and lepidopterous square damage in 295 fields.

Texas: K. P. Ewing reported on August 13: "The bollworm appears to be the insect of most concern at the present time in western areas. In some counties this insect is attacking both irrigated and dry land cotton."

K. P. Ewing collected the yellow-striped armyworm, Prodenia ornithogalli Gn., and the beet armyworm, Laphygma exigua (Hbn.), from cotton in Victoria County on June 5; the garden webworm, Loxostege similalis (Guen.), on cotton in Jackson County on June 7; the yellow-striped armyworm in Lavaca County on June 12, and the pale-sided cutworm, Agrotis malefida Guen., on 3 farms in McLennan County on June 13.

Oklahoma: B. L. Owen collected several species of insects from cotton in 3 counties between June 6 and 20 that included several notorious cotton pests and several insects that are not usually considered as pests of cotton. The determinations